

**REMARKS**

Claims 1-2 remain herein for consideration.

Claims 3-12 have been amended for informalities and remains herein for consideration.

Claim 13 has been cancelled.

No new matter has been entered.

**Rejection Under 35 U.S.C. § 112**

Claims 8-12 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. It is believed that the presently amended claim 8 has antecedent basis for the limitation referenced by the examiner and the referenced language is clear and is not indefinite. Claims 9-12 depend from amended claim 7 and are now similarly clear and not indefinite.

**Rejections Under 35 U.S.C. § 103**

Claims 1, 2-6 and 8-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwamura (Japan Patent No. JP 0603843) in view of Ware (U.S. Pat. No. 6,615,542). This rejection is traversed because there is no teaching or suggestion for combining the references, and even if combined they would not provide the claimed invention.

The applicant's invention is directed to a plant growth system and method not disclosed in the cited references. The Iwamura patent does not disclose "a plurality of stacked independent growing chambers arranged in a planar array around said one or more sources of light" as now recited in original claim 1 and amended claim 7. Iwamura instead shows a plurality of growth tanks 40 dispersedly arranged in a showroom for the purpose of providing a cultivation system capable of collectively controlling a plurality of plants such as trees, flowers, foliage plants, and

the like dispersedly arranged in a room such as an atrium. FIG. 1 of Iwamura shows multiple growth tanks 40 in a diagram that illustrates the connections between the growth tanks 40 and other components of the disclosure rather than the arrangement of the growth tanks. Further, it would impossible to arrange several trees as disclosed in Iwamura in a configuration of a set of stacked independent growing chambers which were arranged in a planar array around one or more sources of light. FIG. 1 of Iwamura shows growth tanks 40 which do not satisfy the claimed structures.

The Ware patent also does not disclose "a plurality of stacked independent growing chambers arranged in a planar array around said one or more sources of light." Ware and Iwamura are both unable to function as the claimed subject matter so they cannot satisfy the claimed structure.

Claims 2-6 depend from claim 1 and add features to the novel claimed combination that is not taught by the references. Claims 8-12 depend from amended independent claim 7 and include additional features to the novel combination recited in claim 7.

Amended claim 7 (originally claim 8) and amended claim 12 (originally claim 13) are rejected under 35 U.S.C. § 103(a) as being unpatentable over the references applied with respect to claim 1 further in view of Carylton ( U.S. Pat. No. 4,006,559). This rejection is traversed for the reasons set forth above regarding claims 1 and 7.

For the above reasons all claims in the application are now clearly patentable over the references and any combination of them. Accordingly the application is in condition for allowance and such action is respectfully solicited.

For the above reasons, claims 1-12 in the application are now clearly patentable over the references and any combination of them. Accordingly, the application is in condition for allowance and such action is respectfully solicited. A petition for extension of time under C.F.R. 1.136(a) is submitted along with the appropriate fee. Please charge or credit 50-3526. No additional fees are due.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Please delete the Abstract and replace with the following:

~~One embodiment of the present invention includes a~~ A plant growth system consisting of a vertically positioned source of light, a reservoir, a pump, a volume of liquid based nutrient composition, a plurality of independent growing chambers arranged in a planar array around ~~said~~ the one or more sources of light, with each of ~~said~~ growing chambers comprising a container ~~portion~~ with a base and sides, an inflow/outflow gate accommodated in the base of ~~said~~ the container ~~portion~~, an height adjustable overflow gate accommodated within ~~said~~ the container ~~portion~~, and drainage plumbing connecting ~~said~~ the container and ~~portion with said~~ reservoir, ~~and wherein~~ Each of said growing the chambers accommodates one or more plants holding ~~containers, wherein~~ and when the said pump is activated, it ~~said pump~~ transports the said nutrient composition from the reservoir through the inflow/outflow gate into ~~said~~ the growing chambers, ~~and wherein~~ When one of the said growing chambers becomes flooded to the level of the ~~said~~ overflow gate, ~~said~~ overflowing nutrient composition is returned to ~~said~~ the reservoir via ~~said~~ the drainage plumbing, ~~and wherein~~ When the said pump is deactivated, ~~said~~ any remaining nutrient ~~composition remaining in each growing chamber~~ is returned ~~returns~~ to the reservoir via the inflow/outflow gates.

IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A plant growth system comprising:

a vertically positioned source of light;

a reservoir;

a pump;

a volume of liquid based nutrient composition;

a plurality of stacked independent growing chambers arranged in a planar array around said one or more sources of light, each of said growing chambers comprising a container portion with a base and sides, an inflow/outflow gate accommodated in the base of said container portion, an height adjustable overflow gate accommodated within said container portion; and drainage plumbing connecting said container portion with said reservoir;

wherein each of said growing chambers accommodates one or more plant holding containers; and

wherein when said pump is activated, said pump transports said nutrient composition from the reservoir through the inflow/outflow gate into said growing chambers; and

wherein when one of said growing chambers becomes flooded to the level of said overflow gate, said overflowing nutrient composition is returned to said reservoir via said drainage plumbing;

and wherein when said pump is deactivated, said nutrient composition remaining in each growing chamber returns to the reservoir via the inflow/outflow gate.

2. (Original) The plant growth system as recited in Claim 1, wherein there is a plurality of said vertically positioned sources of light.

3. (New) The plant growth system as recited in Claim 1, wherein said growing chamber is comprised primarily of a polyethylene material.

4. (Currently Amended) The plant growth system as recited in Claim 1, wherein said inflow/outflow gate is a plurality of inflow/outflow gates. ~~growing chamber is comprised primarily of a polyethylene material.~~

5. (Currently Amended) The plant growth system as recited in Claim 1, wherein said overflow gate is a plurality of overflow gates. ~~inflow/outflow gate is a plurality of inflow/outflow gates.~~

6. (Currently Amended) The plant growth system as recited in Claim 1, wherein the pump is activated and deactivated by a timer. ~~said overflow gate is a plurality of overflow gates.~~

7. (Currently Amended) A plant growth method comprising the steps of:  
activating a pump wherein said pump transports a nutrient composition from a reservoir  
through an inflow/outflow gate into one or more growing chambers; and wherein when one or  
more of said growing chambers becomes flooded to the level of an overflow gate, said  
overflowing nutrient composition is returned to said reservoir via said overflow gate and  
drainage plumbing; and  
deactivating said pump when said nutrient composition in each growing chamber is  
returned to said reservoir via said inflow/outflow gate  
using an apparatus comprised of:

a vertically positioned source of light;

said reservoir;

said pump;

said nutrient composition;

a plurality of stacked independent growing chambers arranged in a planar array around one or more of said sources of light, each of said growing chambers comprising a container portion with a base and sides, an inflow/outflow gate accommodated in the base of said container portion, an height adjustable overflow gate accommodated within said container portion; and drainage plumbing connecting said container portion with said reservoir wherein each of said growing chambers accommodates one or more plant holding containers. The plant growth system as recited in Claim 1, wherein the pump is activated and deactivated by a timer.

8. (Currently Amended) The plant growth method as recited in Claim 7 &, wherein said vertically positioned source of light of said apparatus is comprised of a plurality of said vertically positioned sources of light.

A plant growth method comprising the steps of:

activating a pump wherein said pump transports said nutrient composition from the reservoir through the inflow/outflow gate into said growing chambers; and wherein when one of said growing chambers becomes flooded to the level of said overflow gate, said overflowing nutrient composition is returned to said reservoir via said drainage plumbing; and

deactivating said pump wherein said nutrient composition that is remaining in each growing chamber returns to the reservoir via the inflow/outflow gate

~~using an apparatus comprised of:~~  
~~a vertically positioned source of light;~~  
~~said reservoir;~~  
~~said pump;~~  
~~said volume of liquid based nutrient composition;~~  
~~a plurality of stacked independent growing chambers arranged in a planar array~~  
~~around said one or more sources of light, each of said growing chambers comprising a~~  
~~container portion with a base and sides, an inflow/outflow gate accommodated in the~~  
~~base of said container portion, an height adjustable overflow gate accommodated within~~  
~~said container portion, and drainage plumbing connecting said container portion with~~  
~~said reservoir wherein each of said growing chambers accommodates one or more plant~~  
~~holding containers.~~

9. (Currently Amended) The plant growth method as recited in Claim 7 8, wherein said growing chamber of said apparatus is comprised of polyethylene material. ~~vertically positioned~~  
~~source of light of said apparatus is comprised of a plurality of said vertically positioned sources~~  
~~of light.~~

10. (Currently Amended) The plant growth method as recited in Claim 7 8, wherein said inflow/outflow gate of said apparatus is comprised of a plurality of inflow/outflow gates.  
~~growing chamber of said apparatus is comprised of polyethylene material.~~



11. (Currently Amended) The plant growth method as recited in Claim 7 8, wherein  
said overflow gate of said apparatus is comprised of a plurality of overflow gates. ~~inflow/outflow  
gate of said apparatus is comprised of a plurality of inflow/outflow gates.~~

12. (Currently Amended) The plant growth method as recited in Claim 7 8, wherein  
said apparatus is further comprised of a timer to activate and deactivate said pump. ~~overflow  
gate of said apparatus is comprised of a plurality of overflow gates.~~

13. (Cancelled)